

Amendment Under 37 C.F.R. § 1.111
Serial No.: 09/744,801
Sughrue Ref: Q62916

AMENDMENTS TO THE DRAWINGS

Two sheets replacement drawings

Attachment: Replacement Sheets

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REMARKS

Dealing with preliminary matters first, Applicant has corrected the specification by inserting the headings where appropriate.

Applicant submits herewith two sheets replacement drawings.

Claims 26-54 are all the claims pending in the application. Claims 26 and 39 are independent form, with claim 26 being an apparatus claim and claim 39 being a method claim. Claims 26-30 are rejected under 35 U.S.C. § 102(b) as being anticipated by Rierson (U.S. Patent No. 5,100,314). Claims 26, 27, 30, 29, 44 and 52 are rejected under 35 U.S.C. § 102(e) as being anticipated by Linga, et al. (U.S. Patent No. 6,042,801). Claims 26-32 and 35 are rejected under 35 U.S.C. § 102(b) as being anticipated by Holdner (U.S. Patent No. 4,253,823). On the other hand, claims 33, 34, 36-38, 40-43, 45-51, 53 and 54 have been indicated as containing allowable subject matter, but are objected as being dependent upon a rejected base claim. In response to the Examiner's objections and rejection, Applicant respectfully submits the following remarks.

Rierson is directed to the baking of mineral ore, while the two references to Linga et al ('801 and '823) are directed to the prior art carbon anode baking furnaces in which the anodes are stationary and the heating zones are displaced relative to them. In contrast to the prior art, the present invention is directed to baking carbon anode blocks from green carbon anode blocks in a baking path by displacing the carbon anode blocks through the path while they are packed in sacrificial medium.

In the amended claims, the carbon articles are now identified as carbon anode blocks, except for any reference to the final, baked product. These simply are referred to as baked

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carbon anodes. Independent claim 26, as amended, has clarified that the carbon anode blocks are displaced through the baking path as they are baked. The amended claim also clarifies that the baking path has a first end and a second end, respectively from and to which the carbon anode blocks are displaced, and that a receiving zone is disposed adjacent the first end of the baking path in which green carbon anode blocks are substantially continuously placed into said first end of the baking path, and a discharge zone is provided adjacent the second end of the baking path in which the baked carbon anodes are substantially continuously discharged from the kiln. There is no specific disclosure in the application of first and second ends of the baking path or of a receiving zone and a discharge zone

Support for the first and second ends of the baking path may be found at, for example, the second paragraph on page 6, line 28 to page 7, line 16, and the description of the drawings. Support for the reference to the receiving and discharge zones may also be found in these sections.

Support for amended claim 26, which reads, “a supply of sacrificial medium for packing said green carbon anode blocks in said sacrificial medium prior to the packed carbon anode blocks being substantially continuously displaced through said baking path to form baked carbon anodes”, can be found in the third paragraph on page 6 and the description of the drawings, which provides basis for such a reference.

Claim 39 has been similarly amended although without reference to the apparatus features of receiving and discharge zones.

The Examiner has cited Rierson as anticipating claims 26-30. Applicant submits that claim 26, as amended, is clearly distinguished from Rierson since the reference does not disclose a carbon baking furnace for carbon anode blocks and, by using a rotary kiln, the Rierson apparatus cannot be used for or adapted for use with carbon anode blocks.

The apparatus and process of Rierson is for producing strong degradation-resistant agglomerates or pellets of mineral ore, and, following an oxidation stage, a reducing agent such as coal is injected into the rotary kiln in order to reduce the ore. However, prior to this the ore pellets are subjected to a stabilization and strengthening phase in an induration zone of the rotary kiln, as described in column 8, lines 13-33. It is clear from this paragraph that the stabilization and strengthening of the ore pellets in the induration zone must be conducted in the absence of the reducing agent. Accordingly, as described at column 8, lines 34-51, the reducing agent must be discharged into the kiln by means of a propelling system that causes the coal to contact the ore at a position downstream of the induration zone of the kiln and remote from the first end of the kiln.

In contrast, claim 26 requires that the supply of sacrificial medium, such as coke, is provided as to enable the green carbon anode blocks to be packed in the sacrificial medium prior to the resultant packed carbon anode blocks being substantially continuously displaced through the baking path (from the first end) to form the baked carbon anodes. Thus, the carbon anode blocks are packed in the sacrificial medium throughout their passage through the kiln from the first end to the second end of the baking path.

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The Examiner has also cited Linga, et al. against both independent claims 26 and 39. As noted above, Linga et al. is specifically concerned with a procedure for baking or calcinations of shaped carbon bodies (such as anodes) in a ring chamber furnace, as well as with a packing material for using the same. Ring chamber furnaces were well known prior art before the invention, as described in the paragraph bridging pages 1 and 2 of the application. They do not involve any displacement of carbon anode blocks through a kiln -- instead, it is the heating zones that are displaced with the resultant disadvantages described at page 2, lines 6-15 and elsewhere in the application. The Linga, et al. reference is particularly directed to the idea of using chamotte stone as a packing material in a ring chamber furnace.

The Examiner has also cited Huldner against claim 26 but, again, Huldner is directed to the baking of green carbon bodies such as anodes, in ring-type furnaces. Again, there is no suggestion of displacing carbon anode blocks through a baking path. The Huldner reference is specifically directed to cooling the ring-type furnace by using water sprays.

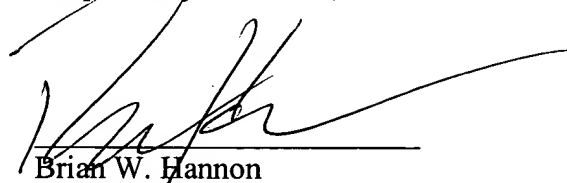
The Examiner has indicated that examined claims 33, 34, 36-38, 40-43, 45-51, 53 and 54, would be allowable if rewritten in independent form. However, in view of the amendments to the independent claims, it is respectfully submitted that the claims, as currently amended, more distinctly claim the present invention.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian W. Hannon", is written over a horizontal line.

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